ASHRAE TC1.5 Computer Applications

Meeting Minutes

New York Winter Meeting

January 21, 2008

These draft minutes have not been approved and are not the official, approved record until approved by this committee.
## ASHRAE TC1.5 ACTIVITIES SHEET

TC NO. **TC 1.5**  
TC TITLE: **Computer Applications**  
CHAIR: **Krishnan Gowri**  
VICE CHAIR/SECRETARY: **Mike Pouchak**  
DATE: **January 21, 2008**

TC Web Site: [http://tc15.ashraetcs.org/index.html](http://tc15.ashraetcs.org/index.html)

<table>
<thead>
<tr>
<th>TC# 1.5</th>
<th>Committee Name: Computer Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chair: Krishnan Gowri</td>
</tr>
</tbody>
</table>

**Meeting was Held**  
(Day) Monday  
(Date) 01/21/2008

<table>
<thead>
<tr>
<th><strong>Membership</strong></th>
<th><strong>TC# 1.5</strong></th>
<th><strong>Committee Name</strong>: Computer Applications</th>
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<tbody>
<tr>
<td></td>
<td>Number Present</td>
<td>Total Number on Committee</td>
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<tr>
<td>Voting Members</td>
<td>9</td>
<td>12</td>
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<tr>
<td>International Members</td>
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<td>1</td>
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<tr>
<td>Corresponding Members</td>
<td>7</td>
<td>25</td>
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<td>Visitors and Guests</td>
<td>8</td>
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<table>
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<tr>
<th><strong>Handbook Responsibilities</strong></th>
<th><strong>Standards Responsibilities</strong></th>
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<tbody>
<tr>
<td>Volume and Chapter (number only)</td>
<td>Next Revision Due Date</td>
</tr>
<tr>
<td>Applications, Ch. 38</td>
<td>TBD</td>
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<tr>
<th><strong>Transactions</strong></th>
<th><strong>Seminars</strong></th>
<th><strong>Forums</strong></th>
<th><strong>Poster Sessions</strong></th>
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<tr>
<td></td>
<td>Seminar 34</td>
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<td>Seminar 89</td>
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<tr>
<th><strong>Current Research Activities</strong></th>
<th><strong>FAQs Responsibilities</strong></th>
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<tbody>
<tr>
<td>Research Project (number only)</td>
<td>PMS meeting held (yes/no)</td>
</tr>
<tr>
<td>1354</td>
<td>yes</td>
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Does Committee have Website on ASHRAE Server? ___Yes___  
URL if on another Server: ________________________

If so, is Website up to date? ____Yes____
## Attendance:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>TC</th>
<th>Res</th>
<th>Prog</th>
<th>Emer</th>
<th>Apps</th>
<th>T&amp;P</th>
<th>Hand book</th>
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<tbody>
<tr>
<td>Michael Bobker</td>
<td>Trg-7</td>
<td></td>
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<td></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Norman Bourassa</td>
<td>California Energy Commission</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>David Branson</td>
<td>Compliance Services Group, Inc.</td>
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<tr>
<td>j. Patrick Carpenter</td>
<td>Vanderweil</td>
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<tr>
<td>Tim Dwyer</td>
<td>London South Bank University</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Krishnan Gowri</td>
<td>Pacific Northwest National Lab</td>
<td>X</td>
<td>X</td>
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<td></td>
<td>X</td>
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<tr>
<td>Walter Grondzik</td>
<td>Florida A&amp;M University</td>
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<tr>
<td>Rob Hitchcock</td>
<td>Lawrence Berkeley National Laboratory</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>John Kennedy</td>
<td>Green Building Services</td>
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<tr>
<td>Ron Nelson</td>
<td>Iowa State University</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Bob Old</td>
<td>Siemens Building Technologies</td>
<td>X</td>
<td>X</td>
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<td>Zheng O’Neill</td>
<td>Utrc.utc</td>
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<tr>
<td>Vernon Peppers</td>
<td>Peppers Engineering</td>
<td>X</td>
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<tr>
<td>Michael Pouchak</td>
<td>Honeywell, Inc.</td>
<td>X</td>
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<td>Steve Rosen</td>
<td>Autodesk, Inc.</td>
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<td>Stephen Roth</td>
<td>Carmel Software</td>
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<td>Larry Schaefer</td>
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<td>Darren Smith</td>
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<td>Michel Tardif</td>
<td>Nhean Canada</td>
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<td>Anna Zhou</td>
<td>Taylor Engineering</td>
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<tr>
<td>Xiaohui Zhou</td>
<td>IOWA Energy Center</td>
<td>X</td>
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Main Committee Meeting Minutes

· **Call to order**
Meeting called to order at 6:30 p.m.

· **Introductions/Sign up sheet/Welcome**

· **Agenda Review**

· **Roll Call:** **Quorum:** 9 of 12 voting members present.

<table>
<thead>
<tr>
<th>MEMBER</th>
<th>PRESENT?</th>
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<tbody>
<tr>
<td>Krishnan Gowri</td>
<td>X</td>
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<tr>
<td>Mike Pouchak</td>
<td>X</td>
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<tr>
<td>Mike Galler</td>
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<td>Nick Rajkovich</td>
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<td>Tim Dwyer</td>
<td>X</td>
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<td>Ron M. Nelson</td>
<td>X</td>
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<td>Vikrant Aute</td>
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<tr>
<td>Dave Branson</td>
<td>X</td>
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<tr>
<td>Walter Grondzik</td>
<td>X</td>
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<tr>
<td>Vernon Peppers</td>
<td>X</td>
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<tr>
<td>Steve Rosen</td>
<td>X</td>
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<tr>
<td>Stephen Roth</td>
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</tbody>
</table>
Motion to approve Long Beach Meeting Minutes:
Moved by Gronkzik, Seconded by Branson. Discussion: None;
Motion Passed: 9-0-0

Chair’s Report
- Dinner Plans
- Announcements
- No paperless server.
- New Research Chair- Hitchcock
- Step up to the plate award given to Pornasak Songakul –filled in for Emerging Apps & Programing. Also given to Walter Gronzik for taking over Handbook temporarily.
- Roster review – Krishnan needs to send in update roster. Ron Nelson to stay as Webmaster. Reviewed current roster for active members.
- Agenda item changes.
- MBO objectives: our TC 1.5 Management by Objective (MBO) goal, requested by the Technical Activities Committee (TAC) is: Increase TC 1.5 subcommittee activities by having each TC 1.5 participant assigned to a subcommittee.

Subcommittee Reports
- Handbook – Walter Grondzik (for Mike Galler)


Request from HB committee – focus on practical applications, sustainability, zero energy, and globalization. Send any updates for TC 1.5 handbook chapter to the Handbook chair. There was several discussions about electronic content for CD +. There were comments that more electronic content from TC 1.5 would be welcome.

Walter is currently serving as Vice Chair of the Society Handbook committee.

Idea from Ron Nelson – have a real time building link such as ASHRAE headquarters building data on-line.

A Signup for volunteers for Handbook committee will be handed around. Latest review for content was outstanding.

There was recognitions for current Handbook chairs and previous handbook contributors.
• **Research Subcommittee** – Rob Hitchcock

Research Subcommittee Met last night. RAC submittals May 15, Aug 15, Dec 15

New RAC laison is Sriram Somasundaram. Include him in the loop on RTAR. Still in process of revising research manual – due Jan 31, 2008. New conflict of interest policy – WS authors no longer prohibited from bidding on contracts with checks and balances clauses.

A research advisory panel, including TC 1.5’s Allison Kwok is modifying the Strategic Plan for ASHRAE.

There was an update from PMS on RP 1354 – which met earlier in the morning before GPC-20 meeting. Glazer made progress since the Long Beach meeting. Completed tasks 1 -4 of 7 total. Currently at 50% complete. 65% of funding is spent. Estimate 25% of budget remaining for rest of project. PMS is considering a no – cost extension to July 31 of this year. There was already one no cost extension.

```
Motion to provide a no-cost extension for RP-1354 to be completed by July 31, 2008:

Moved by Branson, seconded by Dwyer. Discussion: Discussion by Roth expressing concern of potential future delays.

Motion Passed: 9-0-0
```

California Energy Commission (CEC) co- funding for 1354 is going forward after delays and negotiations. Rob received a Step up to the plate aware for his contributions to RP1354.

RP1468 “Development of a Reference Building Information Model (BIM) for Thermal Model Compliance Testing.” — Work statement is being reviewed, need to be submitted by March 3.

Definitions and clarity of terms related to potential BIM sources and which thermal analysis targets are to be used.

```
Action for All – review WS 1468 ;

Mike to publish to list server; email comments to John Kennedy with copy to Rob Hitchcock

Steve Roth to coordinate with Rob Hitchcock to mentor process. Need first Round comments by Feb 8, 2008.

Need revised WS ready for submission by February 21, 2008. Then go to email ballot and forward to RAC by March 3.
```
• **Emerging Applications** – Pornsak Songkakul (for Nick Rajokovich)

Emerging Apps Subcommittee was dissolved. Request the following time slots for Salt Lake: Research 5:30 to 7:00 p.m.; Program Sunday 7 pm to 8 pm. The research time slot will cover brainstorming of new program ideas, new research ideas, RTAR, priority of RTAR, and reviewing works statements.

Discussion to dissolve Emerging Apps. Discussion by Branson: TC 1.5 brings new technology to ASHRAE and changes will support our goals. Hitchcock brought up the concept of keeping the time slot open and changing the name. Branson: We can adjust time due to importance of time slot. Smart Sensors discussion brought up by Zhou. New name for Emerging Apps. Main committee decision – not to dissolve but rename and continue with the subcommittee activities.

<table>
<thead>
<tr>
<th>Motion to allow chair to rename Emerging Apps to Emerging Technologies: (new name) as needed. New name will be the name for the current meeting; example Emerging Technologies: Smart Sensors</th>
<th>Moved by Grondzik; seconded by Pouchak. Discussion: None;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motion Passed: 7-0-0 motion carries.</td>
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</tbody>
</table>

TC 7.5 asked if we would be interested in shoot out for ASHRAE headquarter. Interested members to contact Pornsak, and attend next TC 7.5 meeting.

• **Program subcommittee** – Pornsak Songkakul


Seminars lined up for Salt lake: Benchmarking and beyond- Hitchcock; Benchmarking the effects of virtual learning tools-Dwyer; using BIM for LEED certification-Gowri

New meeting minutes include new priorities and clean up old programs.

<table>
<thead>
<tr>
<th>Motion to approve meeting seminars as proposed in Program subcommittee minutes;</th>
<th>Moved by Grondzik seconded by Roth. Discussion: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motion Passed: 8-0-0</td>
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</table>

Pornsak will not be at Salt Lake. Grondzik agrees to fill in for Pornsak.

• **Web Page** – Ron Nelson

ASHRAE keeps changing page. Contact Ron to post items to web site. Links to list server will be verified.
• **Standards** – Alison Kwok – not present.

• **T&P** – Dave Branson – Met. 3 people attended. Hitchcock, Nelson and Branson. Watching for someone to add to list for remedial action. Peppers pointed out that there was no server for the paperless meeting.

**Liaisons**

• **TAC Section 01 Head** – Tony Jacobi
• **Program Liaison** – Robert Bunn
• **CTTC Liaison** – Lee Loomis
• **Standards Liaison** – Jim Lutz
• **PDC Liaison** – Gordon Holness
• **Special Pubs Liaison** – Harvey Sachs
• **Handbook Liaison 2009** – John Wells
• **RAC Research Liaison** – Sriram Somasundaram
• **Staff Liaison** - Mike Vaughn
• **GPC-20** – Chip Barnaby/Rob Hitchcock – mostly consumed by 1354 RP. Terminology discussion. At several Mark Palmer to address in Terminology 1.6. Discussion for ASHRAE to establish a Wikipedia for terminology. There is a steering committee that reports to tech council on BIM. Gordon Holnes is chair. Incoming treasurer and will be president of ASHRAE. Change IAI BIM report to
• BIM steering committee report (formerly **International Alliance for Interoperability**) - Rob Hitchcock
• **1354-RP PMS** – Rob Hitchcock (See Research Subcommittee report)

**Old Business - none**

**New Business** – Discussion on next 6 months: Branson discussed that we must be on the cutting edge of committee. We may come up with some area of focus that may spur other area of ASHRAE to develop. We should not be afraid to come up with new ideas. Gowri – new technologies included Paperless Wireless, Meeting schedule. May need to focus on stir up enhanced CD content.

Meeting Times for Salt Lake City – No changes.

**Adjourn - Motion to adjourn; Moved by Branson, seconded by Nelson.**

*Motion Carries 8-0-0*
TC 1.5 Emerging Applications Subcommittee Meeting Minutes:

H Concourse D, Sunday January 20th, 2008, 5:30 – 6:30 p.m.

Agenda:

1. Welcome and Introduction

2. Sub-committee chair needed for TC 1.5 Emerging Application Subcommittee

   Tasks and charters of the Emerging app subcommittee were reviewed and discussed. An issue was raised about the existence of this sub-committee. After lengthy discussion on the topic, participants have decided on propose the followings to the full TC 1.5 committee:

   - Dissolve the emerging application sub-committee
   - Request the following time-slots for Salt Lake City
   - Research, Sunday 5:30 p.m. to 7:00 p.m.
   - Program, Sunday 7:00 p.m. to 8:00 p.m.

   The research time slot will cover brainstorming of new program ideas, new research ideas, RTAR, priority of RTAR, and reviewing work statements.

3. Symposium, seminar, program for Salt Lake City, June 21-25, 2008

   Seminar: Benchmarking and Beyond (Action Oriented Benchmarking)
   Chair: Rob Hitchcock
   Speakers: Norm from CEC would be able to recruit 2 speakers, Tim Dwyer would be able to recruit 1 speaker

   Seminar: Use of Portfolio Manager and Energy Star for Performance Benchmarking
   Chair: Need chair
   Speakers: Need speakers

4. New research topic:

   Using ASHRAE collected data to validate the BIM model for the renovated ASHRAE Headquarter

5. Adjourn
TC 1.5 Program Subcommittee Meeting Minutes:

H Concourse D, Sunday January 20th, 2008, 7:15 – 8:00 p.m.

Agenda:

6. Welcome and Introduction

7. Programs for New York

   Seminar 34
   Trends in Using BIM for Design of New Buildings
   Monday, January 21, 2008, 9:45:00 AM-10:45:00 AM

   Seminar 89
   Performance Monitoring to Achieve Net Zero Energy
   Wednesday, January 23, 2008, 1:00 PM-2:30 PM

8. Symposium, seminar, program for Salt Lake City, June 21-25, 2008

<table>
<thead>
<tr>
<th>Seminar</th>
<th>Benchmarking and Beyond (Action Oriented Benchmarking)</th>
<th>Hitchcock</th>
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<tbody>
<tr>
<td>Seminar</td>
<td>Benchmarking the effects of virtual learning tools</td>
<td>Tim Dwyer</td>
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<tr>
<td>Seminar</td>
<td>Using BIM for LEED certification</td>
<td>Gowri</td>
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</table>

9. Clean up programs on the list. See new york 2008 TC-15-Program_012008.XLS

10. New business

    Pornsak will not be able to attend the meeting in Salt Lake City. Need a volunteer to run the program sub-committee meeting.

11. Adjourn
<table>
<thead>
<tr>
<th>Rank</th>
<th>Venue</th>
<th>Type</th>
<th>Title</th>
<th>Chair</th>
<th>Speakers Committed</th>
<th>Notes</th>
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<tr>
<td></td>
<td>Future</td>
<td>Forum</td>
<td>AHSRAE 20/20 - Is the HVAC Engineer Endangered from the Research done in 2000-2005?</td>
<td>Schwedler</td>
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<td></td>
<td>Future</td>
<td>Seminar</td>
<td>Tooling up today’s youth to be an engineer</td>
<td>Tim Dwyer</td>
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<td></td>
<td>Future</td>
<td>Short Course</td>
<td>Electronic Information Exchange - (how to)</td>
<td>Hydeman</td>
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<td>Course dev. Subcommittee</td>
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<td></td>
<td>Future</td>
<td>Transaction</td>
<td>Emerging Applications for the HVAC Industry Part 2</td>
<td>Branson</td>
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<td>Future</td>
<td>Seminar</td>
<td>Unboxing the solutions: Temperature Controls Solutions from Outside the Box</td>
<td>Branson</td>
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<td>Find speakers from outside HVAC industry</td>
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<td>Future</td>
<td>Seminar</td>
<td>Security standards for Wireless Sensors and Controls Network</td>
<td>Songkakul</td>
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<td></td>
<td>Future</td>
<td>Seminar</td>
<td>Net zero file transfer</td>
<td>Hydeman Grondzik, walter</td>
<td>Yes</td>
<td>3 speakers committed, not accepted for New York</td>
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<td>Future</td>
<td>Forum</td>
<td>What can ASHRAE do to electronically store and convey information to HVAC community</td>
<td>Branson</td>
<td>Yes</td>
<td>Nelson has 3 papers under reviewed, not in time for New York</td>
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Future Seminar
Energy Star for Performance Benchmarking Gowri Simulation on the GO

Future

Gadget and ultra portable tools for energy, controls, and HVAC operations with simulation capability
1. Welcome and Introduction


PMS meeting held Monday 8-10am. Contractor GARD Analytics’ Jason Glazer gave status presentation. Good progress on Tasks 1-4. Task 4 approximately 50% complete as defined. 65% funding/time spent to date, with 24% previously planned for Tasks 5-7. 11% remaining for Task 4 is not sufficient. PMS is considering implications. Recommended no-cost extension to July 31, 2008. We need a TC1.5 (closed?) discussion and vote on this.

CEC is processing funding of follow-on effort by Rob Hitchcock to fold results from 1354-RP back into Guideline 20P, and edit Guideline 20P to point of public review release. Proposed Statement of Work available for feedback.


All TC1.5 members are encouraged to read 1468-WS and email comments to John Kennedy with cc to Rob Hitchcock.

Comments received to date:
- Assure tasks are consistent in Objectives and Scope
- Identify specific BIM “sources” and thermal analysis “targets” for clarity of scope.

4. Adjourn

Additional Announcements following Research Subcommittee Chair Breakfast

- RTARs and Work Statements due May 15, August 15, December 15
- 1468-WS should be submitted by March 3 for Spring consideration. Submit to RAC Liaison Sriram Somasundaram (RL1@ashrae.net) for early feedback.
- Revised Research Manual to be posted to ASHRAE website by January 31
- Conflict of Interest Policy revised to no longer discourage WS authors from bidding, with checks and balances:
  - TC must identify at least 3 qualified bidders
  - PES/PMS must have at least 3 members
  - Bidding organizations may not be on PES
  - Contracting organizations may not be on PMS
  - Bidder involved in writing WS may not have unique facility or capability that is not explained in the WS and reasonably available to other bidders
- Research Advisory Panel is revising Strategic Plan. Alison Kwok is members.
- USGBC related research - $1M committed for green building research, which may become an ongoing program. Bruce Hunn, ASHRAE DOT serves on committee. Request for pre-proposals expected late January with probably short deadlines. Work with RAC to submit proposals.
GPC-20 Meeting Minutes NYC
January 21, 2008

Call to Order

Introductions

Roll Call

Barnaby Y
Brook
Burns Y
Forester
Gowri Y
Galler
Hitchcock Y
Kennedy Y
Old
Pouchak Y
Roth Y
Schaefer Y

Action – Barnaby: Check with Bob Old for Siemens replacement voting member

Guests:
Dan Macumber NREL
Chris Balbach Performance Systems Development
Mark Owen ASHRAE Staff
Christie Helms ASHRAE Staff
Steve Rosen Autodesk
Walt Marlowe Executive Director CSI
David Conover ICC

Agenda Approved

Long Beach minutes still need to be formally written up

Action – Long Beach minutes to be assembled, All send missing items and corrections

Liaisons:
Mark Owen present and listening
Working with all ASHRAE pubs to understand what is happening in XML world and how staff can support.

Reports on Related Activities:

BIM/Interoperability Committee discussion
Started as Ad Hoc, but has become Standing Committee reporting to Tech Council, chaired by current Treasurer who will become President. Remit is to get things moving related to BIM and interoperability. Two hour Saturday meeting. Good work to date:
drafts of Journal article and BIM Guide outline. Looking at how this changes ASHRAE business model. Terminology Dictionary and Data Dictionary need to be pulled together. Terminology of HVAC&R is out of date, ASHRAE Staff pushing to have this reworked in 6-12 months within TC1.6. Mark Palmer member of TC1.6 will help define purpose and use of new Dictionary. GPC-20 should play a role in assuring appropriate purpose and use. Can TC1.6 put a process/mechanism in place that supports interactive input to develop and maintain a living document of terminology (a la wikipedia)? Non-volunteer support for this effort is required. Will require ASHRAE staff working in concert with ASHRAE domain expert membership. If all ASHRAE pubs were available in electronic format, then they could be auto-indexed as a first step in collating terminology references.

Can we get BIM and Interoperability committee to document/define a process, and carry it forward to necessary ASHRAE staff.

Action – close loop with TC1.6, SPC166, and BIM/Interop committee to develop the Dictionary living document process and supporting mechanism. GPC-20 input from Barnaby, Kennedy, Schaeffer, Conover to TC1.6.

**OGC (Open Geospatial Consortium)Testbed 5 (Palmer description needed)**

Working on use case scenarios (e.g., cost, energy analysis). Putting together a request for technology package.

**AEX**

Working on chillers with GM at the table.

**CSI**

Interested in GPC-20 activities. Developing wiki process. GPC-20 would welcome input from CSI.

**Web Site and Email Listserv**

Action – Barnaby to distribute instructions on adding themselves to email listserv.

**1354-RP PMS update**

Action – Hitchcock to develop action plan for review of Task 4 results by schema experts.

**CEC-funded SOW for follow-on to 1354-RP**

Action – All – feedback to Hitchcock and Brook on SOW.

**Guideline 20 Document Status**

We did have a plan from Long Beach for working on Guideline, which was not followed through.
Action – Barnaby, Hitchcock, Roth - Feb.18 new Guideline outline distributed to GPC-20, suggestions to Barnaby by next week.

Action – Burns to email to Galler current Guideline document draft for distribution, or posting to web site.